

News Update, May 4th 2021

Mutabilis' EBL-1463 programme graduates from ENABLE with Development Candidate and continues to progress with funding and support from CARB-X

Mutabilis' EBL-1463 programme: A successful case study from ENABLE

- **January 2017: Programme accepted into ENABLE**
- **June 2017: Lead approved**
- **January 2021: Candidate approved by ENABLE**
- **February 2021: New funding announced by CARB-X**
- **April 2021: Programme graduated from ENABLE**

ENABLE is a drug discovery and development consortium, funded by the Innovative Medicines Initiative (IMI), with the expertise and resource base to progress multiple antibacterial programmes in parallel. The consortium brings together scientists with diverse skills, and offers pharmaceutical industry expert advice and guidance to programmes.

Mutabilis, a French biopharmaceutical company specialised in research and development of anti-infectious treatments, joined ENABLE in January 2017. Exactly four years later, the ENABLE Portfolio Management Committee approved EBL-1463 as Development Candidate. EBL-1463 is a novel class of non-beta-lactam inhibitor of penicillin-binding proteins (PBPs) called dabocins. It kills bacteria in the same efficient way as beta-lactams – by interfering with the cell wall synthesis of the bacteria. Contrary to beta-lactams, however, EBL-1463 shows unmatched stability to class A, B, C and D beta-lactamases. The project is now in the preclinical phase.

Since the ENABLE project was launched in 2014, the drug discovery platform has supported the progression of 23 European programmes in various phases of antibacterial drug discovery and development, from Hit identification to end of Phase I. By applying this integrated platform to compound development, and capitalising on the expertise from EFPIA partners, the project's initial objectives have been exceeded, with 5 Leads and 3 Development Candidates identified, and 1 Phase I study completed. The ENABLE project will come to an end mid-2021 and has the potential to deliver an additional 2 Leads and 1 Development Candidate.

Eric Bacqué, EFPIA co-coordinator of ENABLE, said: "The progression of EBL-1463 in ENABLE, from Hit to Candidate selection, demonstrates the great potential of public-private partnerships to create powerful synergies and accelerate the development of antibiotics."

With the ENABLE project soon ending, Mutabilis [announced in February 2021 that its EBL-1463 program received funding from CARB-X](#), a global non-profit partnership led by Boston University, dedicated to accelerating early development antibacterial R&D to address the

rising global threat of drug-resistant bacteria. The funding from CARB-X will support the continued development of EBL-1463 beyond the ENABLE funding period.

Wandrille Ract-Madoux, CEO of Mutabilis, said: “Working 4 years with ENABLE has been a great pleasure for Mutabilis. This rich collaboration allowed us to reach our scientific goals and we have now a clinical candidate, a new antibiotic, resetting the clock of antimicrobial resistance. Today, we are leaving ENABLE and I want to thank all the people involved in this great consortium. Developing new antibiotics is a challenge almost impossible for small biotech companies and the support received from ENABLE helped us greatly. Having entities involved in tackling antimicrobial resistance such as ENABLE, the Novo Holdings Repair Impact Fund or CARB-X on our side, demonstrate our ability to advance innovative scientific programmes and fund them”.

Disclaimer

This news update reflects the author's view and neither IMI nor the European Union or EFPIA are responsible for any use that may be made of the information contained herein.

CARB-X's funding for this project is sponsored by Cooperative Agreement Number IDSEP160030 from ASPR/BARDA and by awards from Wellcome Trust and Germany's Federal Ministry of Education and Research. The content is solely the responsibility of the authors and does not necessarily represent the official views of CARB-X or any of its funders.

About ENABLE

In ENABLE, over 50 European partners from academia and industry, co-led by GlaxoSmithKline and Uppsala University, joined forces in a 7-year project funded by the Innovative Medicines Initiative (IMI) to develop novel antibiotics against key Gram-negative bacteria such as *E. coli*, *K. pneumoniae*, *P. aeruginosa* and *A. baumannii*. ENABLE has rapidly succeeded in building a bottom-up drug development engine with an engaged group of highly competent scientists all working towards the development of new drugs. Contact Lilian Löwenau for any communication related question (info@nd4bb-enable.eu). ENABLE is part of the ND4BB programme.

For more information on the ENABLE project, visit www.nd4bb-enable.eu

The research leading to these results has received funding from the Innovative Medicines Initiative Joint Undertaking under grant agreement n°115583, resources of which are composed of financial contribution from the European Union's Seventh Framework Programme (FP7/2007-2013) and EFPIA companies' in kind contribution. The ENABLE project is also financially supported by contributions from Academic and SME partners. For more information about IMI, visit www.imi.europa.eu

About Mutabilis

Mutabilis is a privately-held French biopharmaceutical company developing novel non-beta-lactam PBP-targeting antibacterial drugs called dabocins to treat the most difficult-to-treat Gram-negative bacterial infections. Dabocins are derived from the non-natural diazabicyclooctane scaffold and show a remarkable stability to beta-lactamase hydrolysis. Mutabilis' team has unique expertise in the derivatization and characterization of this scaffold. Mutabilis' pipeline includes EBL-1463, a novel single-agent intravenous antibiotic against carbapenem-resistant Enterobacterales now supported by CARB-X, and 2G-DAB, a 2nd generation dabocin program supported by the Novo Holdings Repair Impact Fund and which aims to discover the next generation dabocin covering both Enterobacterales and non-fermenters. For more information, please visit <https://mutabilis.fr>

About CARB-X

Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator (CARB-X) is a global non-profit partnership dedicated to accelerating early development antibacterial R&D to address the rising global threat of drug-resistant bacteria. CARB-X is led by Boston University and funded by the [Biomedical Advanced Research and Development Authority](#) (BARDA), part of the Office of the Assistant Secretary for Preparedness and Response (ASPR) in the US Department of Health and Human Services (HHS), the [Wellcome Trust](#), a global charity based in the UK working to improve health globally, [Germany's Federal Ministry of Education and Research](#)



[\(BMBF\)](#), the UK [Department of Health and Social Care's](#) Global Antimicrobial Resistance Innovation Fund (GAMRIF), the [Bill & Melinda Gates Foundation](#), and with in-kind support from [National Institute of Allergy and Infectious Diseases](#) (NIAID), part of the US National Institutes of Health (NIH). CARB-X is investing up to \$480 million from 2016-2022 to support innovative antibiotics and other therapeutics, vaccines and other prevention approaches, and rapid diagnostics. CARB-X supports the world's largest and most innovative pipeline of preclinical products against drug-resistant infections. CARB-X is headquartered at Boston University School of Law. carb-x.org/. Follow us on Twitter @CARB_X.

CARB-X
Combating Antibiotic-Resistant Bacteria